

## The effect of fish oil on two-step tuberculin test in hospitalized patients: A randomized controlled trial

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### \*Abstract

**Background:** According to national tuberculosis control guide, two-step tuberculin skin test (TST) should be done in the elderly, if the initial test is negative. However, it raises questions about the usefulness of this approach.

**Objective:** This study aimed to explore the effects of fish oil supplements on the two-step tuberculin test in hospitalized patients.

**Methods:** In this randomized controlled clinical trial, 128 patients randomly allocated to control group (receiving placebo, n=64) and treatment group (receiving fish oil supplements, n=64) during 2016. Fish oil supplement group was treated with 2 g daily for 4 consecutive days. The outcome was considered a change in 2 sequential TST induration sizes. Significant increase in the size of the secondary induration compared to primary was considered 6 mm or more.

**Findings:** There was significant difference between primary and secondary indurations of two groups (higher in treatment group) ( $P=0.04$ ). According to the results of analysis of variance and correlation tests, two effective factors were identified: initial induration and residence location ( $P=0.014$  and  $P=0.002$ , respectively). In both groups, no clinically significant increase in the size of induration was observed.

**Conclusion:** It seems that the number of cases considered as infected with tuberculosis does not increase with two- rather than one-step tuberculin skin test. Also, the short-term administration of fish oil supplements does not change this result.

**Keywords:** Fish oils, Polyunsaturated fatty acids, Dietary supplements, Tuberculin test, Clinical trial

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